

NOTEBOOK

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EDITED BY JON VARA

A Closer Look at the *Stachybotrys* Scare

In the past year or two, indoor mold has emerged as a major homeowner health scare. Mold-related lawsuits against builders, landlords, and insurance companies have become so common that Mealey Publications — a national clearinghouse of litigation

news and information — now devotes a separate category to them, as it does to suits involving lead, asbestos, and tobacco. Even Rex Morgan, the fictional comic-strip doctor, has weighed in with a multi-week story revolving around unexplained mold-related illnesses.

"It's become a phobia," says Daniel Friedman, a home inspector in Poughkeepsie, N.Y. "Scary news articles do everyone an injustice, because when people are scared, there are always other people who find a way to make money on their fear."

What is mold? Mold is actually a fungus that grows and feeds on organic materials. It reproduces by means of tiny spores, which are present in small numbers almost everywhere in the environment. When a drifting spore encounters a suitable growth medium, adequate moisture, and temperatures between 40 and 100 degrees, it begins to grow. The resulting colony will continue to grow for as long as those conditions persist.

Because houses contain plenty of organic materials — including wood, OSB, and paper drywall facing — it's not surprising that many, if not most, are occasionally colonized by mold in a limited way. Common household mildew, for example, is actually a type of mold.

Ordinary housekeeping usually keeps such areas in check, but when a large part of a building gets damp or wet, the situation can get out of hand. Mold will
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Although the possible long-term health effects of exposure to indoor mold are still being studied, the main characters of the *Rex Morgan* comic strip — like many American homeowners — are convinced that it represents a serious threat. Reprinted with special permission of King Features Syndicate.

Atlanta-Area County Pushes for Contractor Licensing

This past July, the board of commissioners of DeKalb County, Georgia — which encompasses much of metropolitan Atlanta, making it the state's second most populous county — enacted a peculiar series of changes to the state-adopted *CABO One- and Two-Family Dwelling Code*. Among the 20 amendments and supplemental ordinances:

- ✓ All residential basements and crawlspaces must be damp-proofed and positively drained "regardless of water table and/or soil conditions."
- ✓ All residential floors must be "level and true," with a maximum allowable slope of 1/4 inch in 32 inches.
- ✓ Residential driveways may not exceed a 20% grade.
- ✓ All exterior walls to be covered with vinyl siding require

7/16-inch structural wood sheathing.

- ✓ All vinyl siding must be at least .044 thick — substantially thicker than the ASTM minimum of .035 — and must be hand-nailed with galvanized roofing nails.
- ✓ Subject to certain exceptions, the street-facing sides of all residences must be sided with brick, stone, or Portland-based stucco.

The chief proponent of the revised code is DeKalb County Chief Executive Officer Vernon Jones, a former state legislator who for years was frustrated in his efforts to pass statewide licensing of residential builders. "The Home
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infect damp or wet drywall, ceiling tiles, and other parts of a structure. Although wood and other solid materials can be cleaned and disinfected, once the source of the moisture is removed, porous materials and furnishings must be torn out and replaced. In extreme cases, the cost of fixing the damage can exceed the value of the home.

Lawsuits and flawed studies. Large amounts of mold characteristically give off a strong, unpleasant musty smell.



BRETT COOMER

Poor detailing and haphazard construction can lead to the sort of building-envelope failures that allow mold to flourish unseen. In this EIFS-sided home in Texas, thick deposits of mold formed on the OSB sheathing, framing, and drywall.

Exposure to mold is also known to cause allergies, worsening of asthma, and sinus infections. Plaintiffs in construction-defects lawsuits, however, often claim a much wider range of ill effects resulting from their exposure to mold.

But according to Patrick Perrone — a Newark, N.J., lawyer who represents defendants in construction-defects cases — trial judges have tended to screen out such claims as “junk science” before they get to the jury. To date, there’s no solid evidence that mold causes any of

the serious long-term health problems for which it is sometimes blamed. In fact, the federal Centers for Disease Control recently reevaluated a pair of medical studies that linked toxic *Stachybotrys* mold in damp basements to a cluster of unexplained infant deaths in Cleveland and concluded that they were too flawed to be considered reliable.

Take it seriously. Unless medical experts come up with new evidence indicating that mold really is a serious health risk (a possibility, experts are careful to say, that can’t be ruled out), the present mold-related hysteria should eventually run its course.

In the meantime, though, builders should be careful not to downplay or fail to react to customer concerns. Practically speaking, it may not matter whether mold is just an unpleasant nuisance or an unpleasant nuisance that’s also a health risk: If you’re responsible for a moldy building, a property-damage lawsuit can cost you plenty even if no injuries are involved.

Build good houses. Because mold can’t survive without moisture, the most important step a builder can take to avoid trouble is simply to build tight, dry houses. Use durable, moisture-resistant siding and pay extra attention to critical details such as roof penetrations and head flashings. Foundations must be properly drained and waterproofed. To avoid the sorts of hidden moisture-damage problems associated with errors like wrong-side vapor barriers, Perrone urges builders to consult a building scientist who is familiar with regional moisture-control issues.

Develop a plan. Still, occasional leaks are unavoidable, which is why Perrone also recommends that builders develop a plan of action for dealing with moisture problems that do arise.

The most important consideration, he explains, is to seize the initiative early. “When there’s a leak, mold will start growing within 24 to 48 hours,” he says. “Get out there quickly, find the source of moisture, and remove any wet material.”

If a mold problem already exists by the time you become aware of it, Perrone recommends calling your general liability insurance provider immediately and insisting that they send someone to the site to evaluate the situation. Despite the unproven nature of the health threat, your insurer may find it prudent to move the residents out of the house until the problem has been corrected.

Finally, don’t offer medical advice. “If your client is worried about the health effects of mold,” Perrone says, “have them call their doctor.”

Atlanta-Area County Pushes for Contractor Licensing

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Builders Association has kept licensing bottled up in committee for years,” Jones says. “We’re one of about ten states where anyone who wants to can call themselves a builder, which is why we’re seeing a preponderance of shoddy construction.”

To break the perceived deadlock, Jones has adopted what he describes as a two-phase approach. Besides increasing the stringency of the county building code, he expects to establish licensing requirements for all residential contractors operating in DeKalb County. “We’re trying to hold people accountable,” he says.

There are some obvious drawbacks to the first phase of Jones’s plan. “It’s well intentioned,” says Christopher Burke, lobbyist for the Greater Atlanta Home Builders Association. “But it will increase the price of a house by about \$15,000 without bringing much in the way of real benefits.”

In spite of that, Burke believes, the push to license DeKalb County builders could prove beneficial if it ultimately leads to licensing statewide. “Licensing has never gone anywhere because south Georgia is very rural and builders there don’t want it,” he says. “But home builders should be licensed. When there are bad builders out there, the good guys have to deal with that fallout.”

OFFCUTS

Vinyl siding sales decreased 6% in 2000, according to the Vinyl Siding Institute. This is the first time in 15 years that shipments of vinyl siding and vinyl soffit have declined.

The National Oak Flooring Manufacturers Association has adopted new standards governing tongue-and-groove fit, side matching, flooring width, and end-match squareness. For the first time, the standards will also address maximum tolerances for overwood, defined as the allowable thickness difference between boards at the time of manufacture. The tolerances are tighter for prefinished flooring, reflecting the fact that factory-finished floors are not sanded at the job site after installation.

Two California energy agencies are evaluating an innovative residential cooling system. The NightBreeze system uses a special thermostatically controlled damper to automatically bring cool outside air into the house at night. In mild climates, the system uses the hot water heater to heat the home in winter. Centex Homes has agreed to build a prototype house, which will be monitored for one year after the installation of the system.

A judge has ordered two Virginia home builders to pay \$5.2 million for misusing copyrighted plans. The builders had used seven disputed plans to build 304 homes since 1995. Ironically, the companies, Signature Homes and Residential Concepts, had previously sued three other local builders for stealing their home designs — suits that were dropped once the Texas architectural firm that actually owned the copyrights became aware of their actions and filed its own lawsuit.

**BUSINESS
TUNE-UP**

**Making Forms That Work
by Melanie Hodgdon**

Field crews offer all kinds of excuses — from illiteracy to lack of time — for not filling out essential forms such as daily time and materials records. But in my experience, such problems are usually the fault of the form itself — it fails to ask for all the information that's needed or it's illogically arranged and lacks sufficient space for writing.

To be successful, a form must:

- clearly state what information is needed and nothing more
- be simple, convenient, and comfortable for the user to fill in
- be simple, convenient, and comfortable for somebody else to retrieve information from

If a form fails to meet the first two criteria, it's almost certain to fail to meet the third as well. Even if people can be badgered into using a poorly designed form, they'll end up writing in the margins, drawing arrows, and putting notes on the back, which will make it difficult for the office to process.

I always tell people to plan on making about three revisions to a new form before it really works. Knowing this beforehand can save you lots of disappointment, especially if it prevents you from prematurely printing 10,000 copies of a bad form. One approach is to whip up a first version of a new form, write "DRAFT" at the top, and have the field crew begin using it. Have your office workers notice the size of spaces for writing; if people are constantly writing outside the boxes, you need to make the boxes bigger.

Better yet, invite input from your crew and/or office workers in creating the first draft. If you take this approach, squelch your desire to do it on the computer. Many people who would offer suggestions about a scribbling on scrap paper or other obvious "work in process" will clam up when presented with a finished-looking product. So pull out that hunk of Sheetrock, scrap paper, or envelope back and invite others to jump in with their pencils. You'll be more likely to get participation, the crew will buy into the form (and be more likely to use it), and the information you get may be more complete.

One caution, however: Don't forget that it's important to consider the needs of the office worker who may be responsible for transcribing all this information into a job-costing program. Whenever possible, have the form present information in the same order (left-right, up-down) as your job-costing software's screen layout. After all, each carpenter has to fill out only one form a day, but your office worker is responsible for inputting information from all employees.

Creative Marketing Is Child's Play

A resourceful Delaware builder recently found a novel way to showcase her company's craftsmanship while raising money for a worthwhile cause. Patty McDaniel, owner of Boardwalk Builders in Rehoboth Beach, Del., approached the Beebe Medical Center in the nearby town of Lewes about building a children's playhouse to be raffled off as a fundraiser. When the institution agreed, McDaniel paid a visit to a local first-grade class to solicit drawings and design ideas. "The round-top dutch door was their idea," she says. "They also used bright colors in the drawings, so that's the sort of color scheme we went with."



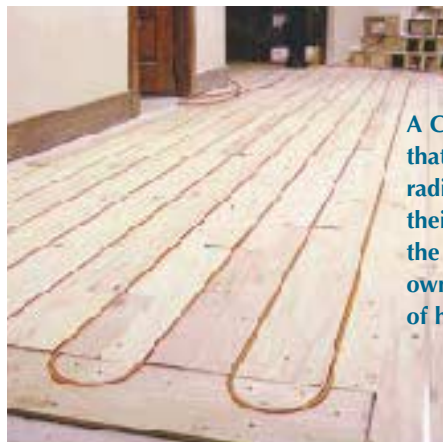
This handsome playhouse, crafted by a Delaware builder for a raffle held by a local hospital, increased its creator's name recognition while raising funds for a worthy cause.

Building materials were donated by local vendors, and McDaniel and her employees spent several weeks of evenings and weekends building the 8x12-foot structure, which includes an oak floor and a loft over a porticoed porch. Despite its modest size, the project called for the full range of the company's carpentry skills. Unlike a full-sized house, McDaniel notes — where there are straightforward areas between details — the play structure contained little *but* detail. "I did the ornamental shingling around the gable-end window," she says. "I think there were only about four of them that didn't have to be cut to fit." The finished playhouse was completed in June and sat on the medical center lawn — with the builder's sign next to it — until late August, when it was delivered to its new owner.

Canadian Study Contradicts Radiant-Heat Claims

Radiant-floor proponents often claim that homeowners with radiant floors set their thermostats lower than those with other types of heat. For example, the Radiant Panel Association website states that with radiant floors, "you feel comfortable at room air temperatures which are lower. You no longer have to force yourself to turn down the thermostat to save — you will do it automatically to be comfortable."

Although this claim — sometimes referred to as "68 feels like 72" — is oft repeated, there has been no study to back it up, according to Don Fugler, senior researcher at the Canada Mortgage and Housing Corporation (CMHC) in Ottawa. To gather data on the issue, CMHC researchers last winter visited 50 Nova Scotia homes with hydronic radiant floors, as well as 25 comparable homes with other types of heating systems, in order to inspect the thermostat settings of the homeowners. It turned out that the average thermostat setting in homes with radiant floors was 68.7°F, while the settings in the other homes averaged 67.6°F. The researchers concluded that "there is no discernible energy savings due to thermostat setting for houses with hydronic in-floor heating."



A Canadian study shows that homeowners with radiant floors maintain their thermostats at about the same level as homeowners with other types of heating systems.

When asked about the lower-thermostat claim made on the Radiant Panel Association website, Lawrence Drake, executive director, answered, "We really don't have a study that supports our statement. The CMHC study certainly poses some interesting questions, and the issue is worth further study."

A technical report on the CMHC study can be found at www.cmhc-schl.gc.ca/publications/en/rh-pr/tech/01-106_e.pdf.

